Interlanguage Modifications in NS-NNS Oral Interactions: A study in an English and Catalan Language Learning Context.

Eva Alcón
Josep R. Guzman
University Jaume I

Abstract

This study attempts to test Swain's hypothesis which claims that negative feedback is vital for interlanguage development. According to Swain, NS (native speaker) signals of incomprehension help NNSs (non-native speakers) to adjust their production towards target-like use, and they also provide the learner with the opportunity of testing and modifying their interlanguage (IL) hypotheses.

The subjects of the present study included nine Spanish speakers learning English as a foreign language and Catalan as a second language. Also serving as subjects for the study there was a Catalan NS and an English NS. The database consisted of nine taped L1 Spanish/L2 English NNSs interacting with the English native speaker, and nine taped L1 Spanish/L2 Catalan NNSs interacting with the Catalan native speaker. In order to control task as a variable, information gap tasks and opinion exchange tasks were performed by interlocutors. Outcomes of the study indicate that NS signals of non-understanding rather than the type of task affect learners' interlanguage adjustments. In particular, it was found that NS clarification questions had an effect on learners' modificaion of their IL rules, while NS comprehension and confirmation requests did not.

Background Research

In the past decade several studies have examined the relationship between conversation and second language acquisition (SLA). Some researchers have focussed on the nature of foreigner talk, while other researchers have turned their attention to the linguistic and conversational adjustments produced among native speakers (NSs) with non-native speakers (NNSs), and non-native speakers with non-native speakers, both in natural and instructional settings. These adjustments may result in ungrammatical speech, but they are thought to provide comprehension of input which, in turn, promotes acquisition (Krahen, 1985). Within this theoretical framework, empirical research has considered the effect of such variables as gender differences (Gass and Varonis, 1986; Pica *et al*, 1991; Alcón and Codina, 1996), expertise differences (Woken and Swales, 1989; Zuengler and Bent, 1991; Zuengler, 1993; Alcón and

Guzman, 1995), and task differences (Duff, 1986; Gass and Varonis, 1994; Long, 1980; Pica, 1987; Pica and Doughty, 1985; Plough and Gass, 1993; Samuda and Rounds, 1993).

Despite the promising results of such research, the input hypothesis suggested by Krashen has also been criticized. White (1987) and Swain (1985) claim that comprehensible input is not sufficient for successful second language acquisition. Both authors suggest that negative feedback is vital to IL development. According to White (1987), if learners encounter input that is incomprehensible because their IL rule does not permit a particular L2 structure, they may be pushed to modify their IL rules to fit the structure. Swain (1985) has argued that NS signals of incomprehension help NNSs to adjust their production towards target-like use. According to Swain, certain communicative demands are put on the learners to make their output more comprehensible. Moreover, they also provide the learner with the opportunity of testing and modifying their IL hypotheses.

The comprehensible output hypothesis has stimulated studies within a research tradition which examines learners and their interlocutors as they negotiate the meaning of certain messages. Theoretical studies (Swain, 1985; Schachter, 1986) emphasize the need to analyze how learners modify and expand their interlanguage as they interact in a second language. Empirical validation for the theoretical construct of comprehensible output has been provided by Pica *et al.* (1989), whose study reveals the extent to which the NNS's production is influenced by the linguistic demands of NS signals of non-understanding.

To further understand the possible contribution of interaction to interlanguage production and development the following study was carried out. Varonis and Gass' model (1985) was used as a frame of reference to describe the negotiation of meaning in interlanguage studies. Following Varonis and Gass' model, the study aims to describe NS-NNS negotiated interaction. However, since our aim was to measure if NNSs were capable of modifying their interlanguage in order to make them comprehensible to the NS, we examined only the sequences in which the native speaker indicated lack of understanding and the NNS responded to the native speaker's signal.

Methodology

The subjects of the study were nine females aged between 17 and 21 who were studying English as a foreign language and Catalan as a second language at the University. As to their L1 all NNSs were Spanish native speakers. As far as native speakers are concerned, neither the English nor the Catalan native speaker had any teaching background, but helped learners in their written papers.

The database consisted of nine taped L1 Spanish/L2 English NNSs interacting with the English native speaker, and nine taped L1 Spanish/L2 Catalan NNSs interacting

with the Catalan native speaker. Four tasks were selected in order to elicit oral interlanguage. The first two were information gap tasks in which the NNS explained to the NS how to arrange objects on a beach scene and on a summer house board. That is to say the NNSs held all the information and the NS needed the information in order to complete the tasks. The third and fourth were two opinion exchange tasks in which the learners engaged in discussions about going on holidays. Each dyad carried out four tasks: an information gap activity in L1 Spanish/L2 English NNSs interaction, an information gap activity in L1 Spanish/L2 Catalan NNSs conversations, an opinion exchange task in L1 Spanish/L2 English NNSs interaction, and an opinion exchange task in L1 Spanish/L2 Catalan NNSs conversations. The reason why we selected two information gap activities and two discussion tasks was to control task familiarity as a variable which is reported to have an effect on NNS conversational structure (Plough and Gass, 1993)

The first 10 minutes of each conversation were recorded and transcribed by the researcher. Varonis and Gass' model (1985) was used as a frame of reference for coding the data. Following Varonis and Gass' model, any negotiation exchange includes an utterance that triggered the indicator (T), an interlocutor's indication of non-understanding, the indicator (I), the response to the indicator (R), and an optional reaction to the response (RR). The following example illustrates a meaning negotiation sequence, also referred as a non- understanding sequence, from the present study. As in the example, most of the non- understanding sequences consisted of more than one cooperative strategy. These were used until the solution of the linguistic breakdown was achieved.

Example:

NNS	Well, I nof like the green plants? (T)
NN	huh? (I)
NNS	I not like green plants (R)
NS	What is green plants (I)
NNS	potatoes, spinach, onions, carrots (R)
NS	Ah, fruit and . . . (RR)
NNS	No, no fruit the plants (RR)
NS	Ah vegetables (RR)
NNS	yes (RR)

As reported by Pica *et al.* (1991), these signaling utterances or indicators can be directed towards the structure, form, or meaning of the trigger, and learners can respond to these signals in a variety of ways: switching to a new or related topic, repeating the initial trigger, modifying the trigger . . . In the present study, we focussed on relating

the explicit indicators of non-understanding, which we called cooperative strategies, with learner interlanguage modifications. Following Cohen (1960), a minimum agreement of 84% was found for the current version of the model.

First we attempted to identify the amount of negotiation and cooperative strategies used by the NS interlocutors in the two different types of communication tasks (See Appendix I for specific information on these cooperative strategies and possible reactions to them). Then, we tried to correlate different types of cooperative strategies with the learners' interlanguage modifications. Based on previous research, the following predictions were made:

1. The proportion of cooperative strategies would be greater in the information gap task than in the opinion exchange task (Doughty and Pica,1986; Duff, 1986).

2. NNS's interlanguage modifications would be greater in the information-gap task than in the opinion-exchange task (Alcón and Guzman, 1995).

3. NNS's interlanguage modification would be greater when NSs asked clarification requests than when they used confirmation checks or comprehension questions (Pica et. al. 1989).

Results and discussion

As we predicted in hypothesis 1 the number of cooperative strategies used by the NSs is greater in the information gap than in the opinion exchange task. (Table I)

Table I. Number of cooperative strategies used by the NSs in the information gap and in the opinion exchange task.

	INFORMATION GAP		OPINION EXCHANGE	
	L1 S./L2 E.	L1 S./ L2 C.	L1 S./L2 E.	L1 S./ L2 C.
CLAR.	132	56	28	20
CONF	254	138	95	63
COMP	34	26	24	15

CLAR. = Clarification questions; CONF. = Confirmation checks; COMP. = Comprehension checks; L1 S = First language Spanish; L2 E = Second language English; L2 C = Second Language Catalan

X^2 analyses of results showed that, although the proportion of cooperative strategies was greater in the information gap activity, there was not a significant difference as far as clarification questions and comprehension questions are concerned. However, there is a significant difference in the use of confirmation checks in L1 Spanish/L2 English NNS interaction ($X^2 = 117.67$, df= 8, p= <.05) and in L1 Spanish/L2 Catalan NNS interaction ($X^2 = 19.21$, df= 8, p= <.05). These results partly support the prediction that the amount of negotiation would be greater in the

information gap than in the opinion exchange task. Examination of the transcripts of the information gap task showed that as the task progressed the NS did not need to ask many clarification questions to complete the task. The NS could quicky guess the meaning of an utterance even if s/he had not been able to understand it in isolation. Closer examination of the data also reveals that checking the interlocutor's meaning appears to be essential for task completion. As we predicted, in the opinion exchange task both the NNS and NS focus mainly on their own production. In the opinion exchange tasks we also observed a tendency to change topics rather than working hard in achieving mutual understanding.

The results for hypothesis 1 do not reveal a clear role of task as a discriminating factor in the frequency of negotiation. Our results partly contradict the claims reported by Doughty and Pica (1986), Duff (1986) and Pica *et al.* (1989); that is, information gap tasks provide learners with greater opportunities to negotiate input. However, in order to understand the differences of results, we agree with Pica *et al.* (1993) that care should be taken when we taxonomize communication task types, since most tasks can become a different type of task by simply changing one feature. Therefore, in our study the degree of difficulty of the information gap task did not force learners to request clarification, but the complexity of the task forced them to check the interlocutor's intentional meaning.

Hypothesis 2 was not supported in this study. As illustrated in Table II the NNS's interlanguage modifications were not statistically greater in the information gap task than in the opinion exchange task.

Table II. NNS's interlanguage modifications in the information gap and in the opinion exchange task

	INFORMATION GAP		OPINION EXCHANGE	
	L1 S./L2 E.	L1 S./ L2 C.	L1 S./L2 E.	L1 S./ L2 C.
T. S.	56	34	142	110
R. M.	91	54	34	63
S. M	179	138	123	81
MS. M	47	33	39	24

T. S. = Topic switch; R. M. = Repetition of native speaker modification; S. M. = Semantic modification; MS. M. = Morphosyntactic modification

This absence of significant effect for task was surprising since we expected that the control over information would influence the interaction patterns of the interlocutors. However, closer examination of the data revealed that in the information gap task both the English and Catalan NS quickly identified the NNS' s description of the item. If the NS had problems in understanding an NNS's description, the NS tended to check the meaning by providing certain interlanguage modifications. NNSs' reaction to NS's interlanguage modifications in this case was acknowledgement. Results of the

study also indicated that the discussion tasks seem to encourage learners to switch topics when communication problems arise. In particular there is a trend for significance in L1 Spanish/L2 English NNS interaction (X^2 = 13.83, df = 8, p =.08). If switching to a new topic might be understood as a communication strategy which help learners to avoid a communication breakdown, it must also be considered that by avoiding certain topics learners are not pushed to produce the interlanguage adjustments to make their output comprehensible. Hence, in this study, whose aim was to measure whether NNSs were capable of modifying their interlanguage in order to make it comprehensible to the NS, the high proportion of topic switches was considered a negative point. Finally, results indicated that semantic modifications, mainly lexical substitution and paraphrase, were used more frequently than morphosyntactic modifications.

Hypothesis 3, which claimed that the NNS's interlanguage modification would be greater when NSs made clarification requests than when NSs used confirmation checks or comprehension questions, was supported in this study. The use of clarification questions by the NS generated more interlanguage modifications than the modifications observed when the Ns used confirmation checks
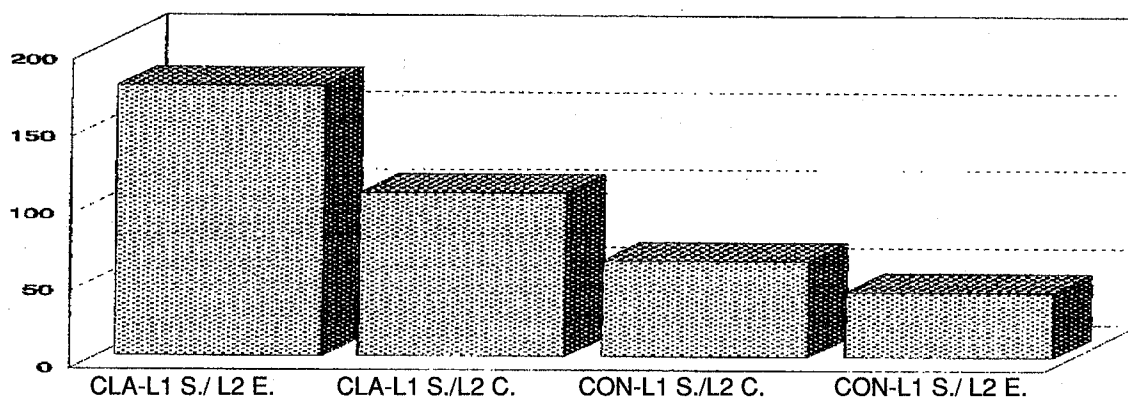

Figure I. NNS's interlanguage modifications in response to the NSs' clarification request and confirmation checks.

CLA-L1S./L2E.: number of modifications produced by NNSs in response to the English NS clarification questions; CLA-L1S./L2C.: number of modifications produced by NNSs in response to the Catalan NS clarification questions; CON-L1S./L2E.: number of modifications produced by NNSs in response to the English NS confirmation checks; CON-L1S./L2C.: number of modifications produced by NNSs in response to the Catalan NS confirmation checks.

Figure 1 shows that the total number of modifications produced by NNSs, in response to the English NS clarification questions, is superior to the interlanguage modifications produced in response to NS confirmation requests. X^2 testing of results showed that the difference was statistically superior (X^2 = 17.73, df = 8, p<.05). Similar statistic results were obtained when we compared the number of interlanguage

modifications produced in L1 Spanish/L2 Catalan NNS interaction. The number of interlanguage modifications used in response to clarification questions is higher than those produced after the use of confirmation checks by the Catalan NS (X^2 = 18.83, df = 8, p<.05). The results of hypothesis 3 indicate that the type of NS signal of comprehension was more important to NNSs' amount of interlanguage modification than the type of task in which learners participated. Although task type may influence the amount and type of input learners are exposed to (Duff, 1986; Pica and Doughty, 1985), results of the study indicate that NNS production of modified output correlate with the type of signal used by the NS, rather than with the type of task. By taken the effect of tasks together with cooperative strategies in interaction, we can claim that task may be a variable that influences the type of interaction which, in turn, facilitates learners' comprehension. However, in our research, as well as that reported by Pica *et al.* (1989), learners' production in the target language seems to be enhanced by NS signals of incomprehension in the course of negotiation.

Conclusion and directions for future research

This study analyzes the way in which learners work together in producing comprehensible output. Outcomes of the study indicate that NS signals of non-understanding rather than the type of task affect learners' interlanguage adjustments. In particular, it was found that NS clarification questions had an effect on learners' production, while NS confirmation requests did not. However, care should be taken in considering the effect of NS signals of incomprehension on second language acquisition. If it is true that NS clarification questions force learners to modify their production, it is also true that NS confirmation requests provide learners with an input which may facilitate language development. What do confirmation requests do for the learner? How can confirmation requests foster acquisition? If negotiation is the means through which language items and structures are highlighted (Alcón, 1994; Plough and Gass, 1993), what is the effect of the different cooperative strategies analyzed in this study on learners' intake? Further empirical research is needed on the effect of negative feedback on language development. In other words, if, as suggested by White (1987), comprehension difficulties are what allow learners to notice that linguistic modifications are necessary, what is the relationship among signals of incomprehension, second language production and language development?

Apendix I

Information on the indicators of non- understanding or cooperative strategies selected in our study:

Comprehension checks: Following Pica (1987, 1991) comprehension checks occurred when the speaker wanted to determine if the listener had understood him. Examples: "Do you understand what I mean?" "Did you get it?"

Clarification checks: Again following the Pica references above, this measure refers to the listener's signal of non- understanding. Examples: "huh?" "What did you say?"

Confirmation checks: Based on Pica's terminology, confirmation checks occurred when the listener was not completely sure of the speaker's message. Example: "Did you say on the left?" "You said is not possible?"

Information on the responses to the cooperative strategies or indicators of non understanding

a) Switch to a new topic

b) Repetition of native speaker modification

Examples:

NS You mean the sofa in the living room?
NNS The sofa in the living room
NS Vols dir posar-se crema protectora
NNS Sí, crema protectora

c) Semantic modification, through paraphrase, synonym, antonym

Paraphrase: Following Faerch and Kasper (1984:49), this measure refers to the speaker's description or explanation of lexica items. Example:

NNS There is also a free room
NS A free room?
NNS Yes, one you must not use.
NS Oh an extra room
NNS I la dona es posa darrere d'un toldo
NS un toldo?
NNS Bé, una tela que es posa davant per que no et vegen quan et lleves la roba
NS En aquest cas un paravent.

Synonym: using a different word with the same meaning as the one mentioned earlier in the discourse. Example:

NNS Do you think that we can place the pot on the floor?
NS pot?
NNS Yes, the big glass for the flowers
NS Oh jar (pronounced properly) NNS Deixar-lo al llitet
NS ¿al llitet?
NNS Bé, al lloc on dorm el xiquet.
NS Al bressol

Antonym: The opposite of a lexical word is used in order to illustrate the meaning of an item

Example:

NNS No this flat is free
NS Free?
NNS Free the opposite of duty.

NS Oh vacant
NNS Cauen de la barca perquè està fluixa
NS ¿la barca està fluixa?
NNS Sí, que no està tensa, dura
NS és a dir, desinflada.

d) *Morphosyntactic modification:*

NNS We have wait
NS Tomorrow you mean?
NNS Yes, we have to wait
NNS I també poden dedicar-se a agafar als peixos.
NS Vols dir agafar ¿què?
NNS Bé, sí, agafar els peixos

References

Alcon, E. (1994) "Negotiation, foreign language awareness and acquisition in the Spanish secondary educational context", *International Journal of Psycholinguistics* 10, 83-96.

Alcón, E. & Guzman, J. R. (1995) "The relationship between content knowledge and practise opportunities in non-native learners' interaction", *Australian Review of Applied Linguistics.*

Alcón, E. & Codina, V. (1996) "The impact of gender on negotiation and vocabulary learning in a situation of interaction", International Sound of Psycholinguistics 12, 21-35.

Cohen, J. A. (1960) "A coefficient of agreement for nominal scales", *Educational and psychological measurement* 20, 37-46.

Doughty, C., & Pica T. (1986). "Information gap tasks: do they facilitate second language acquisition?", *TESOL Quarterly* 20, 305-325.

Duff, P. (1986) "Another look at interlanguage talk: Taking task to task", in Day, R. R. (ed.) *Talking to learn: Conversation in second language acquisition*, Rowley, MA: Newbury House.

Faerch, C. & Kasper, G. (1984) "Two ways of defining communication strategies", *Language Learning* 34, 45-63.

Gass, S. M. & Varonis, E. M. (1986) "Sex differences in NNS/NNS interactions", in Day, R. R. (ed.) *Talking to learn: Conversation in second languaqe acquisition*, Rowley, MA: Newbury House.

Gass, S. M. & Varonis, E. M. (1994) "Input, interaction, and second language production", *Studies in Second Language Acquisition* 16, 283-302.

Krashen, S. (1985) *The input hypothesis: Issues and implications*, London: Longman

Long, M. (1980) *Input, interaction, and second language acquisition.* Unpublished doctoral dissertation, University of California, Los Angeles.

Pica, T. (1987) "Interlanguage adjustments as an outcome of NS-NNS negotiated interaction", *Language Learning* 38, 45-73.

Pica, T. (1991) "Classroom interaction, negotiation, and comprehension: redefining relationships", *System* 19, 437-452.

Pica, T. & Doughty, C. (1985) "Input and interaction in the communicative classroom: A comparison of teacher fronted and group activites", in Gass, S. and Madden, C. (eds.) *Input in second language acquisition*, Rowley, MA.: Newbury House.

Pica, T., L. Holliday, N. Lewis, and L. Morgenthaler (1989) "Comprehensible output as an outcome of linguistic demands on the learner", *Studies in Second Language Acquisition* 11, 63-90.

Pica, T., Holliday, L., Lewis, N., Berducci, D., & Newman, J. (1991). "Language learning through interaction: What role does gender play?", *Studies in Second Language Acquisition* 13, 343-72.

Pica, T., Kanagy, R., & Falodun, J. (1993) "Choosing and using communication tasks for second language instruction", in Crookes, G. & Gass, S. (eds.) (1993). *Tasks and language learning: Integrating theory & practice,* Philadelphia: Multilingual Matters.

Plough, I. & Gass, S. (1993) "Interlocutor and task familiarity: Effects on Interactional structure", in Crookes, G. & Gass, S. (eds.) *Tasks and language learning: Integrating theory & practice,* Philadelphia: Multilingual Matters.

Samuda, V. & Rounds, P. (1993) "Critical Episodes: reference points for analyzyind a task in action", in Crookes, G. & Gass, S. (eds.) *Tasks in a pedagogical context: Integrating theory & practice,* Philadelphia: Multilingual Matters.

Schachter, J. (1986) "Three approaches to the study of input", *Language Learning* 36, 211-226.

Swain, M. (1985) "Communicative competence: Some roles of comprehensible input and comprehensible output in its development", in Gass, S. and Madden, C. (eds.) *Input in second language acquisition*, Rowley, MA.: Newbury House.

Varonis, E. M., & Gass, S. (1985) "Nonnative/nonnative conversations: a model for negotiation of meaning", *Applied Linguistics* 6, 71-90.

White, L. (1987) "Against comprehensible input: The input hypothesis and the development of second language competence", *Applied Linguistics* 6, 95-110.

Woken, M. and J. M. Swales (1989) "Expertise and authority in native-nonnative conversations: The need for a variable account", in Gass, S., Madden, C., Preston, D. R. and Selinker, L. (eds.) *Variation in second language acquisition: Discourse and pragmatics*. Clevedon: Avon, Multilingual Matters.

Zuengler, J. and B. Bent (1991) "Relative knowledge of content domain: An influence on native-nonnative conversations", *Applied Linguistics* 12, 397-415.

Zuengler, J. (1993) "Encouraging learners' conversational participation: The effect of content knowledge", *Language Learning* 43, 403-432.